DesignSTEM

Advancing K-12 STEM education has become a priority on numerous education reforms in the U.S. To that end, improving STEM instruction through professional development (PD) of STEM teachers is critical. This project has been funded by Indiana Department of Education and the project's **vision** is to improve science instruction by using *engineering-design based approaches*. Over the project's 3 year duration we will provide quality PD and on-going support to two cohorts of 10 grade 6-12 science and technology teachers. Each cohort will participate in 2 summer institutes and 8 school-year follow up Professional Learning Communities (PLC) sessions over the course of 2 years (176 hours of PD). Twenty teachers and 3 principals will be involved in the project, impacting more than 1000 students over the life of the grant.

Project goals: (1) Increase teacher science content knowledge and pedagogical skills using integrated STEM practices (2) Provide professional development on effective practices, engineering design-based instruction, and inquiry to be used in science instruction, (3) Improve teachers' skills in developing design-based STEM lessons and curriculum modules (4) Provide cognitive coaching to teachers on how to implement new teaching materials and pedagogies.

The **project partnership** includes Purdue University and Carroll Jr-Sr HS and Central Catholic HS. as core school partners. Middle and high school STEM teachers in other schools in Indiana have been participated in the project as well. We believe that by improving teachers' STEM instruction, the project will impact 7-12 grade students' achievement in STEM subjects in the project schools.